

# SEQUENCE LISTING

<110> Biogen, Inc.  
 Sah, Dinah Wen-Yee

<120> Treatment Using Neublabin Polypeptides

<130> 00689-507 (A118) utility

<140> Filed Herewith  
 <141> 2002-02-28

<150> USSN 06/287,554  
 <151> 2001-03-28

<160> 27

<170> PatentIn Ver. 2.1

<210> 1  
 <211> 861  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> CDS  
 <222> (58)..(717)

<220>  
 <221> 5'UTR  
 <222> (1)..(57)

<220>  
 <221> 3'UTR  
 <222> (718)..(861)

<220>  
 <221> sig\_peptide  
 <222> (58)..(174)

<220>  
 <221> mat\_peptide  
 <222> (298)..(717)

<220>  
 <221> mat\_peptide  
 <222> (370)..(717)

<220>  
 <221> mat\_peptide  
 <222> (379)..(717)

<220>  
 <221> misc\_structure  
 <222> (661)..(663)  
 <223> CARBOHYD: glycosylated asparagine at Asn122

<220>

<221> misc\_structure  
 <222> (424)..(621)  
 <223> DISULFID: Gly43-Gly108 disulfide bridge

<220>  
 <221> misc\_structure  
 <222> (505)..(705)  
 <223> DISULFID: Gly70-Gly136 disulfide bridge

<220>  
 <221> misc\_structure  
 <222> (517)..(711)  
 <223> DISULFID: Gly74-Gly138 disulfide bridge

<220>  
 <221> misc\_structure  
 <222> (616)..(618)  
 <223> DISULFID: Gly107-Gly107 interchain disulfide  
 bridge

<400> 1  
 aggagggtgg gggaacagct caacaatggc tgatggggcg tcctggtggt gatagag 57

atg gaa ctt gga ctt gga ggc ctc tcc acg ctg tcc cac tgc ccc tgg 105  
 Met Glu Leu Gly Leu Gly Gly Leu Ser Thr Leu Ser His Cys Pro Trp  
 -80 -75 -70 -65

cct agg cgg cag cct gcc ctg tgg ccc acc ctg gcc gct ctg gct ctg 153  
 Pro Arg Arg Gln Pro Ala Leu Trp Pro Thr Leu Ala Ala Leu Ala Leu  
 -60 -55 -50

ctg agc agc gtc gca gag gcc tcc ctg ggc tcc gcg ccc cgc agc cct 201  
 Leu Ser Ser Val Ala Glu Ala Ser Leu Gly Ser Ala Pro Arg Ser Pro  
 -45 -40 -35

gcc ccc cgc gaa ggc ccc ccg cct gtc ctg gcg tcc ccc gcc ggc cac 249  
 Ala Pro Arg Glu Gly Pro Pro Pro Val Leu Ala Ser Pro Ala Gly His  
 -30 -25 -20

ctg ccg ggg gga cgc acg gcc cgc tgg tgc agt gga aga gcc cgg cgg 297  
 Leu Pro Gly Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg Ala Arg Arg  
 -15 -10 -5 -1

ccg ccg ccg cag cct tct ccg ccc gcg ccc ccg ccg cct gca ccc cca 345  
 Pro Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro Pro Ala Pro Pro  
 1 5 10 15

tct gct ctt ccc cgc ggg ggc cgc gcg gcg ccg gct ggg ggc ccg ggc 393  
 Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly Gly Pro Gly  
 20 25 30

agc cgc gct ccg gca gcg ggg gcg ccg ggc tgc cgc ctg cgc tcg cag 441  
 Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln  
 35 40 45

ctg gtg ccg gtg cgc gcg ctc ggc ctg ggc cac cgc tcc gac gag ctg 489  
 Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu  
 50 55 60

gtg cgt ttc cgc ttc tgc agc ggc tcc tgc cgc cgc gcg cgc tct cca 537  
 Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro  
 65 70 75 80  
  
 cac gac ctc agc ctg gcc agc cta ctg ggc gcc ggg gcc ctg cga ccg 585  
 His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro  
 85 90 95  
  
 ccc ccg ggc tcc cgg ccc gtc agc cag ccc tgc tgc cga ccc acg cgc 633  
 Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg  
 100 105 110  
  
 tac gaa gcg gtc tcc ttc atg gac gtc aac agc acc tgg aga acc gtg 681  
 Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val  
 115 120 125  
  
 gac cgc ctc tcc gcc acc gcc tgc ggc tgc ctg ggc tgagggtcgc 727  
 Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly  
 130 135 140  
  
 ctccagggct ttgcagactg gacccttacc ggtggctctt cctgcctggg accctcccgc 787  
 agagtcccac tagccagcgg cctcagccag ggacgaaggc ctcaaagctg agaggcccct 847  
 accggtgggt gatg 861

<210> 2  
 <211> 220  
 <212> PRT  
 <213> Homo sapiens

<400> 2  
 Met Glu Leu Gly Leu Gly Gly Leu Ser Thr Leu Ser His Cys Pro Trp  
 -80 -75 -70 -65  
  
 Pro Arg Arg Gln Pro Ala Leu Trp Pro Thr Leu Ala Ala Leu Ala Leu  
 -60 -55 -50  
  
 Leu Ser Ser Val Ala Glu Ala Ser Leu Gly Ser Ala Pro Arg Ser Pro  
 -45 -40 -35  
  
 Ala Pro Arg Glu Gly Pro Pro Pro Val Leu Ala Ser Pro Ala Gly His  
 -30 -25 -20  
  
 Leu Pro Gly Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg Ala Arg Arg  
 -15 -10 -5 -1  
  
 Pro Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro Ala Pro Pro  
 1 5 10 15  
  
 Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly Gly Pro Gly  
 20 25 30  
  
 Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln  
 35 40 45

Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu  
 50 55 60  
 Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro  
 65 70 75 80  
 His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro  
 85 90 95  
 Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg  
 100 105 110  
 Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val  
 115 120 125  
 Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly  
 130 135 140

<210> 3  
 <211> 2136  
 <212> DNA  
 <213> Murinae gen. sp.

<220>  
 <221> CDS  
 <222> (975)..(1646)

<220>  
 <221> 5'UTR  
 <222> (1)..(974)

<220>  
 <221> 3'UTR  
 <222> (1647)..(2136)

<220>  
 <221> sig\_peptide  
 <222> (975)..(1091)

<220>  
 <221> mat\_peptide  
 <222> (1215)..(1646)

<220>  
 <221> mat\_peptide  
 <222> (1290)..(1646)

<220>  
 <221> mat\_peptide  
 <222> (1299)..(1646)

<400> 3  
 gcgggccgcga attcggcacg agggcgctctc gctgcagccc gcgatctcta ctctgcctcc 60  
 tggggctcttc tccaaatgtc tagcccccac cttagaggac cttagcctage cagcggggac 120

cggatccgga ggggtggagcg gccagggtgag ccctgaaagg tggggcgggg cgggggcgct 180  
ctgggccccca ccccgggatc tgggtgacgcc ggggctggaa ttgacaccg gacggcgggc 240  
ggcaggaggc tgctgagga tggagttggg ctcggcccc agatgcggcc cgcgggctct 300  
gccagcaaca agtcctcgg gccccagccc tcgctgcgac tggggcttgg agccctgcac 360  
ccaagggcac agaccggctg ccaaggcccc acttttaact aaaagaggcg ctgccagggtg 420  
cacaactctg ggcgatgatcc acttgagctt cgggggaaag cccagcactg gtcccaggag 480  
aggcgcttag aaggacacgg accaggaccc ctttggtatg gagtgaacgc tgagcatgga 540  
gtggaaggaa ctcaagttac tactttctcc aaccacctg gtaccttcag ccctgaagta 600  
cagagcagaa gggctctaga agacaggacc acagctgtgt gagtctcccc cctgaggcct 660  
tagacgatct ctgagctcag ctgagctttg tttgcccac tggagaagtg agccattgat 720  
tgaccttgtg gcatcgcgaa ggaacaggtc ctgccaagca cctaacacag agagcaaggt 780  
tctccatcgc agctaccgct gctgagttga ctctagctac tccaacctcc tgggtcgctt 840  
cgagagactg gagtggaagg aggaataccc caaaggataa ctaactcatc tttcagtttg 900  
caagctgccg caggaagagg gtgggggaaac ggggtccacga aggcttctga tgggagcttc 960  
  
tggagccgaa agct atg gaa ctg gga ctt gca gag cct act gca ttg tcc 1010  
Met Glu Leu Gly Leu Ala Glu Pro Thr Ala Leu Ser  
-80 -75 -70  
  
cac tgc ctc cgg cct agg tgg cag tca gcc tgg tgg cca acc cta gct 1058  
His Cys Leu Arg Pro Arg Trp Gln Ser Ala Trp Trp Pro Thr Leu Ala  
-65 -60 -55  
  
gtt cta gcc ctg ctg agc tgc gtc aca gaa gct tcc ctg gac cca atg 1106  
Val Leu Ala Leu Leu Ser Cys Val Thr Glu Ala Ser Leu Asp Pro Met  
-50 -45 -40  
  
tcc cgc agc ccc gcc gct cgc gac ggt ccc tca ccg gtc ttg gcg ccc 1154  
Ser Arg Ser Pro Ala Ala Arg Asp Gly Pro Ser Pro Val Leu Ala Pro  
-35 -30 -25  
  
ccc acg gac cac ctg cct ggg gga cac act gcg cat ttg tgc agc gaa 1202  
Pro Thr Asp His Leu Pro Gly Gly His Thr Ala His Leu Cys Ser Glu  
-20 -15 -10 -5  
  
aga acc ctg cga ccc ccg cct cag tct cct cag ccc gca ccc ccg ccg 1250  
Arg Thr Leu Arg Pro Pro Gln Ser Pro Gln Pro Ala Pro Pro Pro  
-1 1 5 10  
  
cct ggt ccc gcg ctc cag tct cct ccc gct gcg ctc cgc ggg gca cgc 1298  
Pro Gly Pro Ala Leu Gln Ser Pro Pro Ala Ala Leu Arg Gly Ala Arg  
15 20 25  
  
gcg gcg cgt gca gga acc cgg agc agc cgc gca cgg acc aca gat gcg 1346  
Ala Ala Arg Ala Gly Thr Arg Ser Ser Arg Ala Arg Thr Thr Asp Ala

30	35	40	
cgc ggc tgc cgc ctg cgc tcg cag ctg gtg ccg gtg agc gcg ctc ggc			1394
Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Ser Ala Leu Gly			
45	50	55	60
cta ggc cac agc tcc gac gag ctg ata cgt ttc cgc ttc tgc agc ggc			1442
Leu Gly His Ser Ser Asp Glu Leu Ile Arg Phe Arg Phe Cys Ser Gly			
	65	70	75
tcg tgc cgc cga gca cgc tcc cag cac gat ctc agt ctg gcc agc cta			1490
Ser Cys Arg Arg Ala Arg Ser Gln His Asp Leu Ser Leu Ala Ser Leu			
	80	85	90
ctg ggc gct ggg gcc cta cgg tcg cct ccc ggg tcc cgg ccg atc agc			1538
Leu Gly Ala Gly Ala Leu Arg Ser Pro Pro Gly Ser Arg Pro Ile Ser			
	95	100	105
cag ccc tgc tgc cgg ccc act cgc tat gag gcc gtc tcc ttc atg gac			1586
Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp			
	110	115	120
gtg aac agc acc tgg agg acc gtg gac cac ctc tcc gcc act gcc tgc			1634
Val Asn Ser Thr Trp Arg Thr Val Asp His Leu Ser Ala Thr Ala Cys			
125	130	135	140
ggc tgt ctg ggc tgaggatgat ctatctccaa gcctttgcac actagaccga			1686
Gly Cys Leu Gly			
tgtgttgccc tacctggaac agctccaccg ggcctcacta accaggagcc tcaactcagc			1746
aggatatgga ggctgcagag ctcaggcccc aggccggtga gtgacagacg tcgtcggcat			1806
gacagacaga gtgaaagatg tcggaaccac tgaccaacag tcccaagttg ttcattggatc			1866
ccagctctac agacaggaga aacctcagct aaagagaact cctctggggag aatccagaaa			1926
tggccctctg tcctggggaa tgaattttga agagatatat atacatatat acattgtagt			1986
cgcgttgctg gaccagcctg tgctgaaacc agtcccgtgt tcacttgtgg aagccgaagc			2046
cctatttatt atttctaaat tattttattta ctttgaaaaa aaacggccaa gtcggcctcc			2106
ctttagtgag ggtaatttg tgatccccgg			2136
<210> 4			
<211> 224			
<212> PRT			
<213> Murinae gen. sp.			
<400> 4			
Met Glu Leu Gly Leu Ala Glu Pro Thr Ala Leu Ser His Cys Leu Arg			
-80	-75	-70	-65
Pro Arg Trp Gln Ser Ala Trp Trp Pro Thr Leu Ala Val Leu Ala Leu			
-60	-55	-50	

Leu Ser Cys Val Thr Glu Ala Ser Leu Asp Pro Met Ser Arg Ser Pro  
                   -45                                  -40                                  -35  
 Ala Ala Arg Asp Gly Pro Ser Pro Val Leu Ala Pro Pro Thr Asp His  
                   -30                                  -25                                  -20  
 Leu Pro Gly Gly His Thr Ala His Leu Cys Ser Glu Arg Thr Leu Arg  
                   -15                                  -10                                  -5                                  -1  
 Pro Pro Pro Gln Ser Pro Gln Pro Ala Pro Pro Pro Pro Gly Pro Ala  
       1                                  5                                  10                                  15  
 Leu Gln Ser Pro Pro Ala Ala Leu Arg Gly Ala Arg Ala Ala Arg Ala  
                   20                                  25                                  30  
 Gly Thr Arg Ser Ser Arg Ala Arg Thr Thr Asp Ala Arg Gly Cys Arg  
                   35                                  40                                  45  
 Leu Arg Ser Gln Leu Val Pro Val Ser Ala Leu Gly Leu Gly His Ser  
                   50                                  55                                  60  
 Ser Asp Glu Leu Ile Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg  
       65                                  70                                  75                                  80  
 Ala Arg Ser Gln His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly  
                   85                                  90                                  95  
 Ala Leu Arg Ser Pro Pro Gly Ser Arg Pro Ile Ser Gln Pro Cys Cys  
                   100                                  105                                  110  
 Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr  
                   115                                  120                                  125  
 Trp Arg Thr Val Asp His Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly  
                   130                                  135                                  140

<210> 5  
 <211> 224  
 <212> PRT  
 <213> Rattus sp.

<220>  
 <221> SIGNAL  
 <222> (1)..(39)

<220>  
 <221> PROPEP  
 <222> (40)..(80)

<220>  
 <221> PEPTIDE  
 <222> (81)..(224)

<220>  
 <221> PEPTIDE  
 <222> (109)..(224)

<220>  
<221> PEPTIDE  
<222> (112)..(224)

<220>  
<221> CARBOHYD  
<222> (206)

<220>  
<221> DISULFID  
<222> (127)..(192)

<220>  
<221> DISULFID  
<222> (154)..(220)

<220>  
<221> DISULFID  
<222> (158)..(222)

<220>  
<221> DISULFID  
<222> (191)  
<223> Interchain disulfide link

<400> 5  
Met Glu Leu Gly Leu Gly Glu Pro Thr Ala Leu Ser His Cys Leu Arg  
1 5 10 15  
Pro Arg Trp Gln Pro Ala Leu Trp Pro Thr Leu Ala Ala Leu Ala Leu  
20 25 30  
Leu Ser Ser Val Thr Glu Ala Ser Leu Asp Pro Met Ser Arg Ser Pro  
35 40 45  
Ala Ser Arg Asp Val Pro Ser Pro Val Leu Ala Pro Pro Thr Asp Tyr  
50 55 60  
Leu Pro Gly Gly His Thr Ala His Leu Cys Ser Glu Arg Ala Leu Arg  
65 70 75 80  
Pro Pro Pro Gln Ser Pro Gln Pro Ala Pro Pro Pro Gly Pro Ala  
85 90 95  
Leu Gln Ser Pro Pro Ala Ala Leu Arg Gly Ala Arg Ala Ala Arg Ala  
100 105 110  
Gly Thr Arg Ser Ser Arg Ala Arg Ala Thr Asp Ala Arg Gly Cys Arg  
115 120 125  
Leu Arg Ser Gln Leu Val Pro Val Ser Ala Leu Gly Leu Gly His Ser  
130 135 140  
Ser Asp Glu Leu Ile Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg  
145 150 155 160  
Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly



	165		170		175
Ala Leu Arg	Ser Pro Pro Gly	Ser Arg Pro Ile Ser Gln	Pro Cys Cys		
	180	185	190		
Arg Pro Thr	Arg Tyr Glu Ala Val	Ser Phe Met Asp Val	Asn Ser Thr		
	195	200	205		
Trp Arg Thr	Val Asp His Leu Ser Ala Thr Ala Cys	Gly Cys Leu Gly			
	210	215	220		

<210> 6  
 <211> 197  
 <212> PRT  
 <213> Homo sapiens

<400> 6  
 Met Gln Arg Trp Lys Ala Ala Ala Leu Ala Ser Val Leu Cys Ser Ser  
 1 5 10 15  
 Val Leu Ser Ile Trp Met Cys Arg Glu Gly Leu Leu Leu Ser His Arg  
 20 25 30  
 Leu Gly Pro Ala Leu Val Pro Leu His Arg Leu Pro Arg Thr Leu Asp  
 35 40 45  
 Ala Arg Ile Ala Arg Leu Ala Gln Tyr Arg Ala Leu Leu Gln Gly Ala  
 50 55 60  
 Pro Asp Ala Met Glu Leu Arg Glu Leu Thr Pro Trp Ala Gly Arg Pro  
 65 70 75 80  
 Pro Gly Pro Arg Arg Arg Ala Gly Pro Arg Arg Arg Arg Ala Arg Ala  
 85 90 95  
 Arg Leu Gly Ala Arg Pro Cys Gly Leu Arg Glu Leu Glu Val Arg Val  
 100 105 110  
 Ser Glu Leu Gly Leu Gly Tyr Ala Ser Asp Glu Thr Val Leu Phe Arg  
 115 120 125  
 Tyr Cys Ala Gly Ala Cys Glu Ala Ala Ala Arg Val Tyr Asp Leu Gly  
 130 135 140  
 Leu Arg Arg Leu Arg Gln Arg Arg Arg Leu Arg Arg Glu Arg Val Arg  
 145 150 155 160  
 Ala Gln Pro Cys Cys Arg Pro Thr Ala Tyr Glu Asp Glu Val Ser Phe  
 165 170 175  
 Leu Asp Ala His Ser Arg Tyr His Thr Val His Glu Leu Ser Ala Arg  
 180 185 190  
 Glu Cys Ala Cys Val

<210> 7  
 <211> 156  
 <212> PRT  
 <213> Homo sapiens

<400> 7  
 Met Ala Val Gly Lys Phe Leu Leu Gly Ser Leu Leu Leu Leu Ser Leu  
           1                  5                  10                  15  
 Gln Leu Gly Gln Gly Trp Gly Pro Asp Ala Arg Gly Val Pro Val Ala  
                   20                  25                  30  
 Asp Gly Glu Phe Ser Ser Glu Gln Val Ala Lys Ala Gly Gly Thr Trp  
           35                  40                  45  
 Leu Gly Thr His Arg Pro Leu Ala Arg Leu Arg Arg Ala Leu Ser Gly  
           50                  55                  60  
 Pro Cys Gln Leu Trp Ser Leu Thr Leu Ser Val Ala Glu Leu Gly Leu  
           65                  70                  75                  80  
 Gly Tyr Ala Ser Glu Glu Lys Val Ile Phe Arg Tyr Cys Ala Gly Ser  
                   85                  90                  95  
 Cys Pro Arg Gly Ala Arg Thr Gln His Gly Leu Ala Leu Ala Arg Leu  
                   100                  105                  110  
 Gln Gly Gln Gly Arg Ala His Gly Gly Pro Cys Cys Arg Pro Thr Arg  
           115                  120                  125  
 Tyr Thr Asp Val Ala Phe Leu Asp Asp Arg His Arg Trp Gln Arg Leu  
           130                  135                  140  
 Pro Gln Leu Ser Ala Ala Ala Cys Gly Cys Gly Gly  
           145                  150                  155

<210> 8  
 <211> 211  
 <212> PRT  
 <213> Homo sapiens

<400> 8  
 Met Lys Leu Trp Asp Val Val Ala Val Cys Leu Val Leu Leu His Thr  
           1                  5                  10                  15  
 Ala Ser Ala Phe Pro Leu Pro Ala Gly Lys Arg Pro Pro Glu Ala Pro  
                   20                  25                  30  
 Ala Glu Asp Arg Ser Leu Gly Arg Arg Arg Ala Pro Phe Ala Leu Ser  
           35                  40                  45  
 Ser Asp Ser Asn Met Pro Glu Asp Tyr Pro Asp Gln Phe Asp Asp Val  
           50                  55                  60

Met Asp Phe Ile Gln Ala Thr Ile Lys Arg Leu Lys Arg Ser Pro Asp  
 65 70 75 80  
 Lys Gln Met Ala Val Leu Pro Arg Arg Glu Arg Asn Arg Gln Ala Ala  
 85 90 95  
 Ala Ala Asn Pro Glu Asn Ser Arg Gly Lys Gly Arg Arg Gly Gln Arg  
 100 105 110  
 Gly Lys Asn Arg Gly Cys Val Leu Thr Ala Ile His Leu Asn Val Thr  
 115 120 125  
 Asp Leu Gly Leu Gly Tyr Glu Thr Lys Glu Glu Leu Ile Phe Arg Tyr  
 130 135 140  
 Cys Ser Gly Ser Cys Asp Ala Ala Glu Thr Thr Tyr Asp Lys Ile Leu  
 145 150 155 160  
 Lys Asn Leu Ser Arg Asn Arg Arg Leu Val Ser Asp Lys Val Gly Gln  
 165 170 175  
 Ala Cys Cys Arg Pro Ile Ala Phe Asp Asp Asp Leu Ser Phe Leu Asp  
 180 185 190  
 Asp Asn Leu Val Tyr His Ile Leu Arg Lys His Ser Ala Lys Arg Cys  
 195 200 205  
 Gly Cys Ile  
 210

<210> 9  
 <211> 39  
 <212> DNA  
 <213> Homo sapiens

<400> 9  
 aaggaaaaaa gcggccgcca tggaacttgg acttggagg 39

<210> 10  
 <211> 39  
 <212> DNA  
 <213> Homo sapiens

<400> 10  
 ttttttcctt ggcgccgct cagcccaggc agccgcagg 39

<210> 11  
 <211> 140  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> CARBOHYD  
 <222> (122)  
 <223> glycosylated asparagine

<400> 11

Pro Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro Pro Ala Pro Pro  
1 5 10 15

Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly Gly Pro Gly  
20 25 30

Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln  
35 40 45

Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu  
50 55 60

Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro  
65 70 75 80

His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro  
85 90 95

Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg  
100 105 110

Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val  
115 120 125

Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly  
130 135 140

<210> 12

<211> 116

<212> PRT

<213> Homo sapiens

<220>

<221> CARBOHYD

<222> (98)

<223> glycosylated asparagine

<400> 12

Ala Ala Arg Ala Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly Ala  
1 5 10 15

Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu Gly  
20 25 30

Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly  
35 40 45

Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu  
50 55 60

Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser  
65 70 75 80

Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp  
85 90 95

Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala Cys  
100 105 110

Gly Cys Leu Gly  
115

<210> 13  
<211> 113  
<212> PRT  
<213> Homo sapiens

<220>  
<221> CARBOHYD  
<222> (95)  
<223> glycosylated asparagine

<400> 13  
Ala Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys  
1 5 10 15  
Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His  
20 25 30  
Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg  
35 40 45  
Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala  
50 55 60  
Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys  
65 70 75 80  
Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser  
85 90 95  
Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu  
100 105 110

Gly

<210> 14  
<211> 112  
<212> PRT  
<213> Homo sapiens

<400> 14  
Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg  
1 5 10 15  
Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg  
20 25 30  
Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg  
35 40 45

Ala	Arg	Ser	Pro	His	Asp	Leu	Ser	Leu	Ala	Ser	Leu	Leu	Gly	Ala	Gly
50						55					60				
Ala	Leu	Arg	Pro	Pro	Pro	Gly	Ser	Arg	Pro	Val	Ser	Gln	Pro	Cys	Cys
65					70				75						80
Arg	Pro	Thr	Arg	Tyr	Glu	Ala	Val	Ser	Phe	Met	Asp	Val	Asn	Ser	Thr
				85				90						95	
Trp	Arg	Thr	Val	Asp	Arg	Leu	Ser	Ala	Thr	Ala	Cys	Gly	Cys	Leu	Gly
			100					105					110		

<210> 15  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 15															
Gly	Pro	Gly	Ser	Arg	Ala	Arg	Ala	Ala	Gly	Ala	Arg	Gly	Cys	Arg	Leu
1				5					10					15	
Arg	Ser	Gln	Leu	Val	Pro	Val	Arg	Ala	Leu	Gly	Leu	Gly	His	Arg	Ser
			20					25					30		
Asp	Glu	Leu	Val	Arg	Phe	Arg	Phe	Cys	Ser	Gly	Ser	Cys	Arg	Arg	Ala
		35					40					45			
Arg	Ser	Pro	His	Asp	Leu	Ser	Leu	Ala	Ser	Leu	Leu	Gly	Ala	Gly	Ala
		50				55					60				
Leu	Arg	Pro	Pro	Pro	Gly	Ser	Arg	Pro	Val	Ser	Gln	Pro	Cys	Cys	Arg
65					70				75						80
Pro	Thr	Arg	Tyr	Glu	Ala	Val	Ser	Phe	Met	Asp	Val	Asn	Ser	Thr	Trp
				85				90						95	
Arg	Thr	Val	Asp	Arg	Leu	Ser	Ala	Thr	Ala	Cys	Gly	Cys	Leu	Gly	
			100					105					110		

<210> 16  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

<400> 16															
Pro	Gly	Ser	Arg	Ala	Arg	Ala	Ala	Gly	Ala	Arg	Gly	Cys	Arg	Leu	Arg
1				5					10					15	
Ser	Gln	Leu	Val	Pro	Val	Arg	Ala	Leu	Gly	Leu	Gly	His	Arg	Ser	Asp
			20					25					30		
Glu	Leu	Val	Arg	Phe	Arg	Phe	Cys	Ser	Gly	Ser	Cys	Arg	Arg	Ala	Arg

35                      40                      45  
 Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu  
     50                      55                      60  
 Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro  
     65                      70                      75                      80  
 Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg  
                     85                      90                      95  
 Thr Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly  
                     100                      105                      110

<210> 17  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

<400> 17  
 Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser  
     1                      5                      10                      15  
 Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu  
                     20                      25                      30  
 Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser  
                     35                      40                      45  
 Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg  
                     50                      55                      60  
 Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr  
     65                      70                      75                      80  
 Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr  
                     85                      90                      95  
 Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly  
                     100                      105

<210> 18  
 <211> 108  
 <212> PRT  
 <213> Homo sapiens

<400> 18  
 Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln  
     1                      5                      10                      15  
 Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu  
                     20                      25                      30  
 Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro  
                     35                      40                      45





Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu  
65 70 75 80

Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg  
85 90 95

Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly  
100 105

<210> 21  
<211> 105  
<212> PRT  
<213> Homo sapiens

<400> 21  
Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro  
1 5 10 15

Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe  
20 25 30

Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu  
35 40 45

Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly  
50 55 60

Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala  
65 70 75 80

Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu  
85 90 95

Ser Ala Thr Ala Cys Gly Cys Leu Gly  
100 105

<210> 22  
<211> 104  
<212> PRT  
<213> Homo sapiens

<400> 22  
Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val  
1 5 10 15

Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg  
20 25 30

Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser  
35 40 45

Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser  
50 55 60

Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val

65		70		75		80									
Ser	Phe	Met	Asp	Val	Asn	Ser	Thr	Trp	Arg	Thr	Val	Asp	Arg	Leu	Ser
			85						90					95	

Ala Thr Ala Cys Gly Cys Leu Gly  
100

<210> 23  
<211> 103  
<212> PRT  
<213> Homo sapiens

<400> 23
Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg
1 5 10 15

Ala	Leu	Gly	Leu	Gly	His	Arg	Ser	Asp	Glu	Leu	Val	Arg	Phe	Arg	Phe
		20						25					30		

Cys	Ser	Gly	Ser	Cys	Arg	Arg	Ala	Arg	Ser	Pro	His	Asp	Leu	Ser	Leu
		35					40					45			

Ala	Ser	Leu	Leu	Gly	Ala	Gly	Ala	Leu	Arg	Pro	Pro	Pro	Gly	Ser	Arg
	50					55					60				

Pro	Val	Ser	Gln	Pro	Cys	Cys	Arg	Pro	Thr	Arg	Tyr	Glu	Ala	Val	Ser
65					70					75					80

Phe	Met	Asp	Val	Asn	Ser	Thr	Trp	Arg	Thr	Val	Asp	Arg	Leu	Ser	Ala
				85					90					95	

Thr Ala Cys Gly Cys Leu Gly  
100

<210> 24  
<211> 102  
<212> PRT  
<213> Homo sapiens

<400> 24
Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala
1 5 10 15

Leu	Gly	Leu	Gly	His	Arg	Ser	Asp	Glu	Leu	Val	Arg	Phe	Arg	Phe	Cys
		20						25				30			

Ser	Gly	Ser	Cys	Arg	Arg	Ala	Arg	Ser	Pro	His	Asp	Leu	Ser	Leu	Ala
		35					40					45			

Ser	Leu	Leu	Gly	Ala	Gly	Ala	Leu	Arg	Pro	Pro	Pro	Gly	Ser	Arg	Pro
	50					55					60				

Val	Ser	Gln	Pro	Cys	Cys	Arg	Pro	Thr	Arg	Tyr	Glu	Ala	Val	Ser	Phe
65					70					75					80

Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr  
85 90 95

Ala Cys Gly Cys Leu Gly  
100

<210> 25  
<211> 101  
<212> PRT  
<213> Homo sapiens

<400> 25  
Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu  
1 5 10 15

Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser  
20 25 30

Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser  
35 40 45

Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val  
50 55 60

Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met  
65 70 75 80

Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala  
85 90 95

Cys Gly Cys Leu Gly  
100

<210> 26  
<211> 100  
<212> PRT  
<213> Homo sapiens

<400> 26  
Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu Gly  
1 5 10 15

Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly  
20 25 30

Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu  
35 40 45

Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser  
50 55 60

Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp  
65 70 75 80

Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala Cys  
85 90 95

Gly Cys Leu Gly  
100

<210> 27  
<211> 99  
<212> PRT  
<213> Homo sapiens

<400> 27  
Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu Gly Leu  
1 5 10 15

Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser  
20 25 30

Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu  
35 40 45

Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln  
50 55 60

Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val  
65 70 75 80

Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala Cys Gly  
85 90 95

Cys Leu Gly

TRA 1736922v1